

IN THE CLAIMS:

Claims 1 has been amended and claims 26-35 have been added as follows:

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1. (Currently Amended) An integrated heat spreader constructed and arranged to be adhesively affixed, with a sealant, to at least a portion of a component, comprising:

a body portion;

a solid continuous lip portion substantially vertically oriented relative to the body portion; and

a plurality of step portions adjacent perpendicular to the lip portion, wherein the plurality of step portions are spaced apart by a plurality of cutouts.

2. (Canceled)

3. (Canceled)

4. (Previously Amended) The integrated heat spreader of claim 1, wherein the plurality of step portions are non-uniformly spaced.

5. (Previously Amended) The integrated heat spreader of claim 1, wherein the plurality of step portions are formed of copper or aluminum.

6. (Previously Amended) The integrated heat spreader of claim 1, wherein the plurality of step portions are formed of a carbon/carbon composite.

7. (Previously Amended) The integrated heat spreader of claim 1, wherein the plurality of step portions are formed of a carbon/metal composite.

8. (Original) The integrated heat spreader of claim 7, wherein the

carbon/metal composite comprises a matrix fiber reinforced composite.

9. (Original) The integrated heat spreader of claim 7, wherein the carbon/metal composite comprises a carbon/copper composite.

10. (Previously Amended) The integrated heat spreader of claim 1, further comprising a coating applied to the plurality of step portions.

11. (Original) The integrated heat spreader of claim 10, wherein the coating comprises nickel.

12. (Previously Amended) The integrated heat spreader of claim 1, further comprising a plated portion integrally formed with the plurality of step portions.

13. (Original) The integrated heat spreader of claim 12, wherein the plated portion is formed of gold, silver, tin, nickel, or a metal composite.

14. (Original) The integrated heat spreader of claim 1, wherein the sealant is silicone-based or epoxy-based.

15. (Original) The integrated heat spreader of claim 1, wherein the component comprises a substrate.

16. (Original) The integrated heat spreader of claim 1, wherein the body portion comprises a substantially rectangular or square frame.

17. (Original) The integrated heat spreader of claim 1, further comprising a thermal interface material (TIM) interposing a die and the body portion, the TIM comprising one of solder, a polymer/solder composite, and a polymer.

18 – 25 (Canceled)

26. (New) An integrated heat spreader constructed and arranged to be adhesively affixed, with a sealant, to at least a portion of a component, comprising:

a body portion;

a solid continuous lip portion substantially vertically oriented relative to the body portion; and

a plurality of step portions perpendicular to the lip portion, wherein the plurality of step portions are spaced apart by a plurality of cutouts and there are at least five cutouts.

27. (New) The integrated heat spreader of claim 26, wherein the plurality of step portions are non-uniformly spaced.

28. (New) The integrated heat spreader of claim 26, further comprising a coating applied to the plurality of step portions.

29. (New) The integrated heat spreader of claim 28, wherein the coating comprises nickel.

30. (New) The integrated heat spreader of claim 26, further comprising a plated portion integrally formed with the plurality of step portions.

31. (New) The integrated heat spreader of claim 30, wherein the plated portion is formed of gold, silver, tin, nickel, or a metal composite.

32. (New) The integrated heat spreader of claim 26, further comprising a thermal interface material (TIM) interposing a die and the body portion, the TIM comprising one of solder, a polymer/solder composite, and a polymer.

33. (New) The integrated heat spreader of claim 26, wherein the plurality of step portions are formed of a carbon/carbon composite.

34. (New) The integrated heat spreader of claim 26, wherein the plurality of step portions are formed of a carbon/metal composite.

35. (New) The integrated heat spreader of claim 34, wherein the carbon/metal composite comprises a matrix fiber reinforced composite.

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